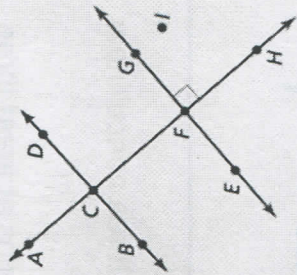


### Lesson Title 2.3 Postulate & Diagrams

TASK 1: True or false based on the diagram. If false, state WHY.

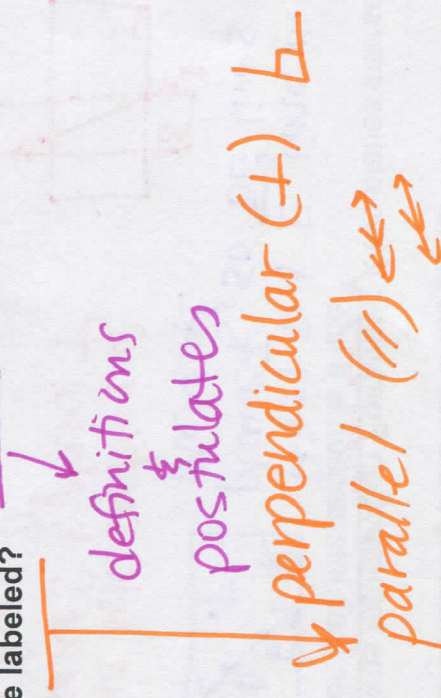
- a) All the points shown are coplanar. **true**
- b) Points D, G, and I are collinear. **true**
- c) Points A, C, and H are collinear. **true**
- d)  $\vec{EG}$  and  $\vec{AH}$  are perpendicular. **true**
- e)  $\angle BCA$  and  $\angle ACD$  are a linear pair. **true**
- f)  $\vec{AF}$  and  $\vec{BD}$  are perpendicular. **False, no  $\perp$**
- g)  $\vec{EG}$  and  $\vec{BD}$  are parallel. **False, no  $\parallel$**
- h)  $\vec{AF}$  and  $\vec{BD}$  are coplanar. **true**
- i)  $\vec{EG}$  and  $\vec{BD}$  do not intersect. **False, no  $\parallel$**
- j)  $\vec{AF}$  and  $\vec{BD}$  intersect. **true**
- k)  $\vec{EG}$  and  $\vec{BD}$  are perpendicular. **False; no  $\perp$**
- l)  $\angle ACD$  and  $\angle BCF$  are vertical angles. **true**
- m)  $\vec{AC}$  and  $\vec{FH}$  are the same line. **true**



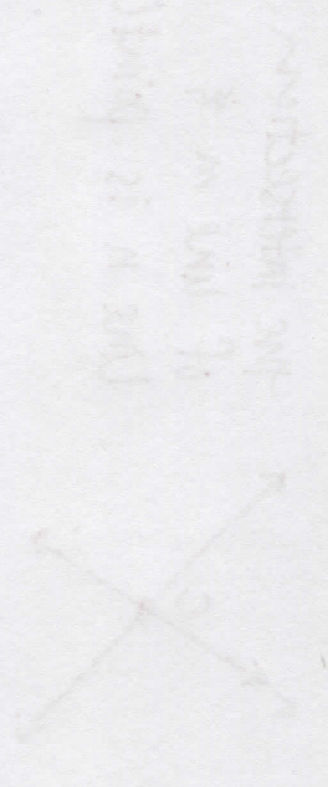
HGEO

Date

What can be assumed from diagrams vs what needs to be labeled?



What do you need to remind yourself of so that you do not forget it later?

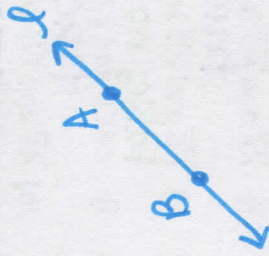




TASK 3:

Two Point Postulate: through any two points, there exists exactly one line.

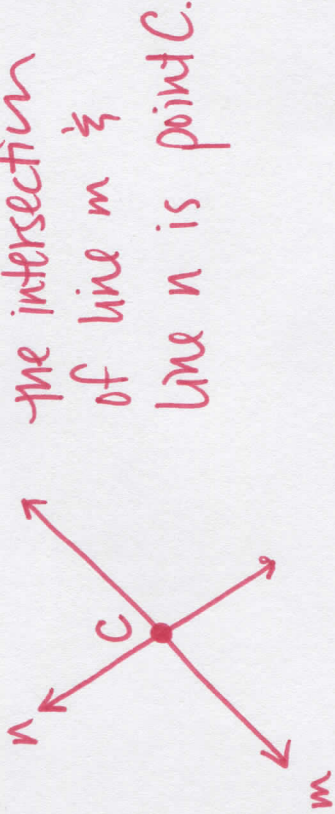
Line-Point Postulate: a line contains at least two points.



through points  
A & B there is  
exactly one line l.  
Line l contains  
at least two points

TASK 4:

Line Intersection Postulate: if two lines intersect, then their intersection is exactly one point.

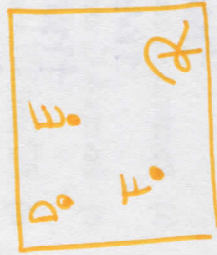


the intersection  
of line m &  
line n is point C.

TASK 5:

Three Point Postulate: Through any three noncollinear points, there exists exactly one plane.

Plane-Point Postulate: A plane contains at least three noncollinear points.

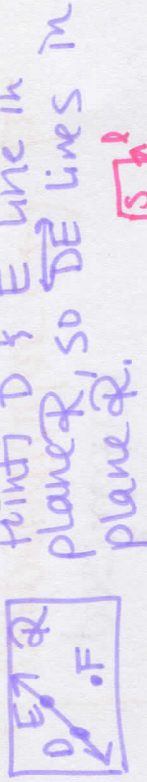


through points  
D, E, & F, there  
is exactly one  
plane, plane R.  
Plane R contains  
at least three  
noncollinear points.

TASK 6:

Plane-Line Postulate: If two points lie in a plane, then the line containing them lies in the plane.

Plane Intersection Postulate: If two planes intersect, then their intersection is a line.



Points D & E line in  
plane R, so DE line is  
plane R.  
The intersection of  
plane S & plane T  
is line l.

Still need help with:

noncollinear points.